PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

REC'D 14 OCT 2005
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Applicant's or agent's file reference	FOR FURTHER ACTION	See Form PCT/IPEA/416
052209-117		
International application No. PCT/IB2004/001813	International filing date (day/month/year) 02.06.2004	Priority date (day/month/year) 03.06.2003
International Patent Classification (IPC) or national classification and IPC A61K38/24, A61P15/08		
Applicant FERRING B.V. et al.		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 8 sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising:
   a. ☒ *sent to the applicant and to the International Bureau)* a total of 8 sheets, as follows:
      ☐ sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
      ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.
   b. ☐ *(sent to the International Bureau only)* a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

☒	Box No. I	Basis of the opinion
☐	Box No. II	Priority
☒	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
☐	Box No. IV	Lack of unity of invention
☒	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
☒	Box No. VI	Certain documents cited
☐	Box No. VII	Certain defects in the international application
☐	Box No. VIII	Certain observations on the international application

Date of submission of the demand	Date of completion of this report
28.12.2004	13.10.2005
Name and mailing address of the international preliminary examining authority: European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized Officer Bochelen, D Telephone No. +49 89 2399-8150

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/IB2004/001813

Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

   ☐ This report is based on translations from the original language into the following language , which is the language of a translation furnished for the purposes of:
   - ☐ international search (under Rules 12.3 and 23.1(b))
   - ☐ publication of the international application (under Rule 12.4)
   - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the **elements*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

Description, Pages	
1-23	as originally filed
Claims, Numbers	
1-41	filed with telefax on 10.02.2005
Drawings, Sheets	
1/2, 2/2	as originally filed

☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing

3. ☐ The amendments have resulted in the cancellation of:
   - ☐ the description, pages
   - ☐ the claims, Nos.
   - ☐ the drawings, sheets/figs
   - ☐ the sequence listing *(specify)*:
   - ☐ any table(s) related to sequence listing *(specify)*:

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
   - ☐ the description, pages
   - ☐ the claims, Nos.
   - ☐ the drawings, sheets/figs
   - ☐ the sequence listing *(specify)*:
   - ☐ any table(s) related to sequence listing *(specify)*:

* If item 4 applies, some or all of these sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/IB2004/001813

Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been examined in respect of:

☐ the entire international application,

☒ claims Nos. 21-33

because:

☒ the said international application, or the said claims Nos. 21-33 with regard to industrial applicability relate to the following subject matter which does not require an international preliminary examination (specify):

see separate sheet

☐ the description, claims or drawings *(indicate particular elements below)* or said claims Nos. are so unclear that no meaningful opinion could be formed *(specify)*:

☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.

☐ no international search report has been established for the said claims Nos.

☐ the nucleotide and/or amino acid sequence listing does not comply with the standard provided for in Annex C of the Administrative Instructions in that:

the written form
- ☐ has not been furnished
- ☐ does not comply with the standard

the computer readable form
- ☐ has not been furnished
- ☐ does not comply with the standard

☐ the tables related to the nucleotide and/or amino acid sequence listing, if in computer readable form only, do not comply with the technical requirements provided for in Annex C-*bis* of the Administrative Instructions.

☐ See separate sheet for further details

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/IB2004/001813

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes:	Claims	3-10,24-28
	No:	Claims	1-2,11--23,29-41
Inventive step (IS)	Yes:	Claims	
	No:	Claims	1-41
Industrial applicability (IA)	Yes:	Claims	1-20,34-41
	No:	Claims	

2. Citations and explanations (Rule 70.7):

see separate sheet

Box No. VI Certain documents cited

1. Certain published documents (Rule 70.10)

and / or

2. Non-written disclosures (Rule 70.9)

see separate sheet

Re Item III

Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. Claims 21-33 relate to subject-matter considered by this Authority to be covered by the provisions of Rule 67.1(iv) PCT. Consequently, no opinion will be formulated with respect to the industrial applicability of the subject-matter of these claims (Article 34(4)(a)(I) PCT).

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

2. Reference is made to the following documents:

D1: EP-A-1 364 658 (APPLIED RESEARCH SYSTEMS) 26 November 2003 (2003-11-26)

D2: WO 00/67778 A (FRANKS STEPHEN ; HILLIER STEPHEN (GB); APPLIED RESEARCH SYSTEMS (NL)) 16 November 2000 (2000-11-16)

D3: WO 03/022302 A (MENEZO YVES ; OWEN DEBORAH JANE (GB); APPLIED RESEARCH SYSTEMS (NL)) 20 March 2003 (2003-03-20)

D4: WO 03/022303 A (MENEZO YVES ; OWEN DEBORAH JANE (GB); APPLIED RESEARCH SYSTEMS (NL)) 20 March 2003 (2003-03-20)

D5: FILICORI M ET AL: "STIMULATION AND GROWTH OF ANTRAL OVARIAN FOLLICLES BY SELECTIVE LH ACTIVITY ADMINISTRATION IN WOMEN" March 2002 (2002-03), JOURNAL OF CLINICAL ENDOCRINOLOGY AND METABOLISM, NEW YORK, NY, US, PAGE(S) 1156-1161 , XP008004363 ISSN: 0021-972X

D6: FILICORI M ET AL: "LUTEINIZING HORMONE ACTIVITY SUPPLEMENTATION ENHANCES FOLLICLE-STIMULATING HORMONE EFFICACY AND IMPROVES OVULATION INDUCTION OUTCOME" JOURNAL OF CLINICAL ENDOCRINOLOGY AND METABOLISM, NEW YORK, NY, US, vol. 84, no. 8, August 1999 (1999-08), pages 2659-2663, XP001055466 ISSN: 0021-972X

D7: THOMPSON K A ET AL: "GONADOTROPHIN REQUIREMENTS OF THE DEVELOPING FOLLICLE" FERTILITY AND STERILITY, ELSEVIER SCIENCE INC, NEW YORK, NY, US, vol. 63, no. 2, February 1995 (1995-

02), pages 273-276, XP001064790 ISSN: 0015-0282

If not indicated otherwise the relevant passages are those mentioned in the search report.

3. Prior art:

Document D2 discloses compositions comprising FSH and hCG and use thereof for inducing folliculogenesis.

Document D3 discloses compositions comprising hCG and use thereof in combination with FSH for controlled ovarian stimulation.

Document D4 discloses compositions comprising hCG and use thereof in combination with FSH for controlled ovarian stimulation.

Document D5 discloses controlled ovarian stimulation by administration of 150 IU FSH in combination with 50 IU hCG.

Document D6 discloses controlled ovarian stimulation by administration of 50 IU FSH in combination with 50 IU hCG.

Document D7 discloses the administration of 150 IU FSH in combination with 50 to 75 IU hCG.

4. Novelty (Art. 33(2) PCT):

4.1 Document D2 discloses compositions comprising both FSH and LH or the equivalent dose of hCG (see claim 12). It seems that the dose ratio disclosed in document D2 (see claim 15) falls in the functional definition of claim 1, i.e a dose inducing folliculogenesis, follicular maturation without ovarian hyperstimulation. Therefore, it seems that claim 1 lacks novelty in view of document D2. The dependent claims 2 and 11-18 as well lack novelty.

4.2 Claims 19-20 and 34-37 lack novelty in view of D2-D6 disclosing separate administration of FSH and hCG.

4.3 Claim 21 lacks novelty in view of documents D4 and D5. The dose ratio of FSH and hCG used in D3 (see example on p16) and D4 (see example 1 on p19) appears to fall in the scope of said claim. The method disclosed in D3 and D4 comprises the step of assessing the hormone level and triggering ovulation by a hCG bolus (see D3: p16 §1 and D4: p19 §1).

4.4 The subject-matter of claims 38 and 39 is not new in view of documents D2-D7.

5. Inventive step (Art. 33(3) PCT):

With regard to inventive step the following is noted:

The closest prior art is document D3 (alternatively D4) which discloses a combination of FSH and hCG for use in COH and to improve the implantation and decrease miscarriage (see p12 §3). The subject-matter of present claim 21 (as well as dependent claims 3-10) differs in that a different dose ratio of FSH and hCG is used. The problem to be solved may thus be regarded as to provide compositions for inducing folliculogenesis and maturation without ovarian hyperstimulation. Documents D5 and D6 disclose that reduced doses of hCG in combination with FSH improve folliculogenesis and avoid ovarian hyperstimulation syndrome (see D5: p1161 col1 and D6: paragraph bridging p2662-2663). It would thus be obvious for a skilled man to reduce the hCG dose in combination with FSH. Moreover, the specific dose ratios of FSH and hCG of said claim do not result in a unexpected technical effect. Therefore, an inventive step is not acknowledged for said claims.

6. Industrial applicability (Art. 33(4) PCT):

For the assessment of the present claims 21-33 on the question whether they are industrially applicable, no unified criteria exist in the PCT Contracting States. The patentability can also be dependent upon the formulation of the claims. The EPO, for example, does not recognize as industrially applicable the subject-matter of claims to the use of a compound in medical treatment, but may allow, however, claims to a known compound for first use in medical treatment and the use of such a compound for the manufacture of a medicament for a new medical treatment.

Re Item VI

Certain documents cited

7. Certain published documents

Application No Patent No	Publication date *(day/month/year)*	Filing date *(day/month/year)*	Priority date *(valid claim)* *(day/month/year)*
EP-1-364-658 A	26.11.2003	24.05.2002	

EP-1-364-658 A discloses compositions comprising FSH and hCG and the use thereof in controlled ovarian hyperstimulation. EP-1-364-658 A will be taken into account for the assessment of novelty in the regional phase.

WHAT IS CLAIMED IS:

1. A pharmaceutical composition consisting essentially of FSH and hCG in at least one pharmaceutically acceptable carrier, wherein the ratio of FSH to hCG is conducive, upon administration of said composition, to folliculogenesis and follicular maturation without ovarian hyperstimulation.

2. The composition of claim 1 free from any other proteins of mammal origin.

3. The composition of claim 1 wherein the ratio of FSH to hCG is selected from the group consisting of 50 IU FSH:1 IU hCG, 50 IU FSH:5 IU hCG, 50 IU FSH:10 IU hCG, 50 IU FSH:25 IU hCG, 50 IU FSH:75 IU hCG, 50 IU FSH:100 IU hCG, 50 IU FSH:200 IU hCG, 50 IU FSH:300 IU hCG, 50 IU FSH:400 IU hCG, 75 IU FSH:1 IU hCG, 75 IU FSH:5 IU hCG, 75 IU FSH:10 IU hCG, 75 IU FSH:25 IU hCG, 75 IU FSH:50 IU hCG, 75 IU FSH:75 IU hCG, 75 IU FSH:100 IU hCG, 75 IU FSH:200 IU hCG, 75 IU FSH:300 IU hCG, 75 IU FSH:400 IU hCG, 100 IU FSH:1 IU hCG, 100 IU FSH:5 IU hCG, 100 IU FSH:10 IU hCG, 100 IU FSH:25 IU hCG, 100 IU FSH:50 IU hCG, 100 IU FSH:75 IU hCG, 100 IU FSH:100 IU hCG, 100 IU FSH:200 IU hCG, 100 IU FSH:300 IU hCG, 100 IU FSH:400 IU hCG, 150 IU FSH:1 IU hCG, 150 IU FSH:5 IU hCG, 150 IU FSH:10 IU hCG, 150 IU FSH:25 IU hCG, 150 IU FSH:100 IU hCG, 150 IU FSH:200 IU hCG, 150 IU FSH:300 IU hCG, 150 IU FSH:400 IU hCG, 200 IU FSH:1 IU hCG, 200 IU FSH:5 IU hCG, 200 IU FSH:10 IU hCG, 200 IU FSH:25 IU hCG, 200 IU FSH:50 IU hCG, 200 IU FSH:75 IU hCG, 200 IU FSH:100 IU hCG, 200 IU FSH:200 IU hCG, 200 IU FSH:300 IU hCG, and 200 IU FSH:400 IU hCG.

4. The composition of claim 3 wherein the ratio of FSH to hCG is selected from the group consisting of 50 IU FSH:1 IU hCG, 50 IU FSH:5 IU hCG, 50 IU FSH:10 IU hCG, 50 IU FSH:25 IU hCG, 50 IU FSH:75 IU hCG, 50 IU FSH:100 IU hCG, 50 IU FSH:200 IU hCG, 50 IU FSH:300 IU hCG, 50 IU

FSH:400 IU hCG, 75 IU FSH:1 IU hCG, 75 IU FSH:5 IU hCG, 75 IU FSH:10 IU hCG, 75 IU FSH:50 IU hCG, 75 IU FSH:100 IU hCG, 75 IU FSH:200 IU hCG, 75 IU FSH:300 IU hCG, 75 IU FSH:400 IU hCG, 100 IU FSH:1 IU hCG, 100 IU FSH:5 IU hCG, 100 IU FSH:10 IU hCG, 100 IU FSH:25 IU hCG, 100 IU FSH:50 IU hCG, 100 IU FSH:75 IU hCG, 100 IU FSH:100 IU hCG, 100 IU FSH:200 IU hCG, 100 IU FSH:300 IU hCG, 100 IU FSH:400 IU hCG, 150 IU FSH:1 IU hCG, 150 IU FSH:5 IU hCG, 150 IU FSH:10 IU hCG, 150 IU FSH:25 IU hCG, 150 IU FSH:100 IU hCG, 150 IU FSH:200 IU hCG, 150 IU FSH:300 IU hCG, 150 IU FSH:400 IU hCG, 200 IU FSH:1 IU hCG, 200 IU FSH:5 IU hCG, 200 IU FSH:10 IU hCG, 200 IU FSH:25 IU hCG, 200 IU FSH:50 IU hCG, 200 IU FSH:75 IU hCG, 200 IU FSH:100 IU hCG, 200 IU FSH:200 IU hCG, 200 IU FSH:300 IU hCG, and 200 IU FSH:400 IU hCG.

5. The pharmaceutical composition of claim 3 wherein the ratio of FSH to hCG is selected from the group consisting of 50 IU FSH:1 IU hCG, 50 IU FSH:5 IU hCG, 50 IU FSH:10 IU hCG, 50 IU FSH:25 IU hCG, 75 IU FSH:1 IU hCG, 75 IU FSH:5 IU hCG, 75 IU FSH:10 IU hCG, 75 IU FSH:50 IU hCG, 75 IU FSH:100 IU hCG,100 IU FSH:1 IU hCG, 100 IU FSH:5 IU hCG, 100 IU FSH:10 IU hCG, 100 IU FSH:25 IU hCG, 100 IU FSH:50 IU hCG, 100 IU FSH:75 IU hCG, 100 IU FSH:100 IU hCG,150 IU FSH:1 IU hCG, 150 IU FSH:5 IU hCG, 150 IU FSH:10 IU hCG, 150 IU FSH:25 IU hCG, 150 IU FSH:100 IU hCG, 150 IU FSH:200 IU hCG, 200 IU FSH:1 IU hCG, 200 IU FSH:5 IU hCG, 200 IU FSH:10 IU hCG, 200 IU FSH:25 IU hCG, 200 IU FSH:50 IU hCG, 200 IU FSH:75 IU hCG, 200 IU FSH:100 IU hCG, and 200 IU FSH:200 IU hCG.

6. The pharmaceutical composition of claim 3 wherein the ratio of FSH to hCG is selected from the group consisting of 50 IU FSH:75 IU hCG, 50 IU FSH:100 IU hCG, 50 IU FSH:200 IU hCG, 50 IU FSH:300 IU hCG, 50 IU FSH:400 IU hCG, 75 IU FSH:200 IU hCG, 75 IU FSH:300 IU hCG, 75 IU FSH:400 IU hCG,100 IU FSH:200 IU hCG, 100 IU FSH:300 IU hCG, 100 IU

AMENDED SHEET (ARTICLE 19)

FSH:400 IU hCG,150 IU FSH:300 IU hCG, 150 IU FSH:400 IU hCG, 200 IU FSH:300 IU hCG, and 200 IU FSH:400 IU hCG.

7. The pharmaceutical composition of claim 3 wherein the ratio of FSH to hCG is selected from the group consisting of 50 IU FSH:100 IU hCG, 50 IU FSH:200 IU hCG, and 50 IU FSH:400 IU hCG.

8. The pharmaceutical composition of claim 7, wherein the ratio of FHS to hCG is 50 IU FSH:100 IU hCG.

9. The pharmaceutical composition of claim 3 wherein the ratio of FSH to hCG is selected from the group consisting of 100 IU FSH:100 IU hCG, 100 IU FSH:200 IU hCG, and 100 IU FSH:400 IU hCG.

10. The pharmaceutical composition of claim 3 wherein the ratio of FSH to hCG is selected from the group consisting of 100 IU FSH:5 IU hCG, 100 IU FSH:10 IU hCG, and 100 IU FSH:25 IU hCG.

11. The pharmaceutical composition according to claim 1, wherein said FSH is human-derived FSH.

12. The pharmaceutical composition according to claim 1, in lyophilized form.

13. The pharmaceutical composition according to claim 1, in unit dosage form.

14. The pharmaceutical composition according to claim 13, in solid dosage form.

15. The pharmaceutical composition according to claim 14, wherein the solid dosage form is selected from the group consisting of capsules, tablets, suppositories, pills, powders, and granules.

16. The pharmaceutical composition according to claim 1 in liquid form.

17. The pharmaceutical composition according to claim 16 wherein the liquid form is supplied in a vial.

18. The pharmaceutical composition according to claim 16 wherein the liquid form is supplied in a pre-filled syringe or cartridge.

19. An assemblage comprising a first vial and a second vial, each of said vials containing a pharmaceutical composition according to claim 1, wherein the ratio of FSH to hCG differs between the first vial and the second vial.

20. The assemblage according to claim 19 further comprising written instructions on the timing for administering the compositions contained in the first and second vials.

21. A method of inducing ovulation, comprising:

(A) administering at least one pharmaceutical composition characterized by a ratio of FSH to hCG that is selected from the group consisting of 50 IU FSH:1 IU hCG, 50 IU FSH:5 IU hCG, 50 IU FSH:10 IU hCG, 50 IU FSH:25 IU hCG, 50 IU FSH:75 IU hCG, 50 IU FSH:100 IU hCG, 50 IU FSH:200 IU hCG, 50 IU FSH:300 IU hCG, 50 IU FSH:400 IU hCG, 75 IU FSH:1 IU hCG, 75 IU FSH:5 IU hCG, 75 IU FSH:10 IU hCG, 75 IU FSH:25 IU hCG, 75 IU FSH:50 IU hCG, 75 IU FSH:75 IU hCG, 75 IU FSH:100 IU hCG, 75 IU FSH:200 IU hCG, 75 IU FSH:300 IU hCG, 75 IU FSH:400 IU hCG, 100 IU FSH:1 IU hCG, 100 IU FSH:5 IU hCG, 100 IU FSH:10 IU hCG, 100 IU FSH:25 IU hCG, 100 IU FSH:50 IU hCG, 100 IU FSH:75 IU hCG, 100 IU FSH:100 IU hCG, 100 IU FSH:200 IU hCG, 100 IU FSH:300 IU hCG, 100 IU FSH:400 IU hCG, 150 IU FSH:1 IU hCG, 150 IU FSH:5 IU hCG, 150 IU FSH:10 IU hCG, 150 IU FSH:25 IU hCG, 150 IU FSH:100 IU hCG, 150 IU FSH:200 IU hCG, 150 IU FSH:300 IU hCG, 150 IU FSH:400 IU hCG, 200 IU

FSH:1 IU hCG, 200 IU FSH:5 IU hCG, 200 IU FSH:10 IU hCG, 200 IU FSH:25 IU hCG, 200 IU FSH:50 IU hCG, 200 IU FSH:75 IU hCG, 200 IU FSH:100 IU hCG, 200 IU FSH:200 IU hCG, 200 IU FSH:300 IU hCG, and 200 IU FSH:400 IU hCG.

(B) monitoring serum hormone levels, follicle size and follicle number; and then

(C) inducing ovulation by administration of an hCG bolus.

22. The method of claim 21, wherein the ratio of FSH to hCG is selected from the group consisting of 50 IU FSH:1 IU hCG, 50 IU FSH:5 IU hCG, 50 IU FSH:10 IU hCG, 50 IU FSH:25 IU hCG, 50 IU FSH:75 IU hCG, 50 IU FSH:100 IU hCG, 50 IU FSH:200 IU hCG, 50 IU FSH:300 IU hCG, 50 IU FSH:400 IU hCG, 75 IU FSH:1 IU hCG, 75 IU FSH:5 IU hCG, 75 IU FSH:10 IU hCG, 75 IU FSH:50 IU hCG, 75 IU FSH:100 IU hCG, 75 IU FSH:200 IU hCG, 75 IU FSH:300 IU hCG, 75 IU FSH:400 IU hCG, 100 IU FSH:1 IU hCG, 100 IU FSH:5 IU hCG, 100 IU FSH:10 IU hCG, 100 IU FSH:25 IU hCG, 100 IU FSH:50 IU hCG, 100 IU FSH:75 IU hCG, 100 IU FSH:100 IU hCG, 100 IU FSH:200 IU hCG, 100 IU FSH:300 IU hCG, 100 IU FSH:400 IU hCG, 150 IU FSH:1 IU hCG, 150 IU FSH:5 IU hCG, 150 IU FSH:10 IU hCG, 150 IU FSH:25 IU hCG, 150 IU FSH:100 IU hCG, 150 IU FSH:200 IU hCG, 150 IU FSH:300 IU hCG, 150 IU FSH:400 IU hCG, 200 IU FSH:1 IU hCG, 200 IU FSH:5 IU hCG, 200 IU FSH:10 IU hCG, 200 IU FSH:25 IU hCG, 200 IU FSH:50 IU hCG, 200 IU FSH:75 IU hCG, 200 IU FSH:100 IU hCG, 200 IU FSH:200 IU hCG, 200 IU FSH:300 IU hCG, and 200 IU FSH:400 IU hCG.

23. The method of claim 21, wherein the ratio of FSH to hCG is selected from the group consisting of 50 IU FSH:1 IU hCG, 50 IU FSH:5 IU hCG, 50 IU FSH:10 IU hCG, 50 IU FSH:25 IU hCG, 75 IU FSH:1 IU hCG, 75 IU FSH:5 IU hCG, 75 IU FSH:10 IU hCG, 75 IU FSH:50 IU hCG, 75 IU FSH:100 IU hCG,100 IU FSH:1 IU hCG, 100 IU FSH:5 IU hCG, 100 IU FSH:10 IU hCG, 100 IU FSH:25 IU hCG, 100 IU FSH:50 IU hCG, 100 IU

FSH:75 IU hCG, 100 IU FSH:100 IU hCG,150 IU FSH:1 IU hCG, 150 IU FSH:5 IU hCG, 150 IU FSH:10 IU hCG, 150 IU FSH:25 IU hCG, 150 IU FSH:100 IU hCG, 150 IU FSH:200 IU hCG, 200 IU FSH:1 IU hCG, 200 IU FSH:5 IU hCG, 200 IU FSH:10 IU hCG, 200 IU FSH:25 IU hCG, 200 IU FSH:50 IU hCG, 200 IU FSH:75 IU hCG, 200 IU FSH:100 IU hCG, and 200 IU FSH:200 IU hCG.

24. The method of claim 21, wherein the ratio of FSH to hCG is selected from the group consisting of 50 IU FSH:75 IU hCG, 50 IU FSH:100 IU hCG, 50 IU FSH:200 IU hCG, 50 IU FSH:300 IU hCG, 50 IU FSH:400 IU hCG, 75 IU FSH:200 IU hCG, 75 IU FSH:300 IU hCG, 75 IU FSH:400 IU hCG,100 IU FSH:200 IU hCG, 100 IU FSH:300 IU hCG, 100 IU FSH:400 IU hCG,150 IU FSH:300 IU hCG, 150 IU FSH:400 IU hCG, 200 IU FSH:300 IU hCG, and 200 IU FSH:400 IU hCG.

25. The method of claim 21, wherein the ratio of FSH to hCG is selected from the group consisting of 50 IU FSH:100 IU hCG, 50 IU FSH:200 IU hCG, and 50 IU FSH:400 IU hCG.

26. The method of 21, wherein the ratio of FSH to hCG is 50 IU FSH:100 IU hCG.

27. The method of claim 21, wherein the ratio of FSH to hCG is selected from the group consisting of 100 IU FSH:100 IU hCG, 100 IU FSH:200 IU hCG, and 100 IU FSH:400 IU hCG..

28. The method of claim 21, wherein the ratio of FSH to hCG is selected from the group consisting of 100 IU FSH:5 IU hCG, 100 IU FSH:10 IU hCG, and 100 IU FSH:25 IU hCG.

29. The method of claim 21, wherein step (A) comprises administering in series at least two pharmaceutical compositions, characterized by a ratio of FSH to hCG selected from said group, that is either the same or differs with respect to said ratio.

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30. The method of claim 21, wherein each succeeding composition in said series contains hCG that is increased over the preceding composition in said series.

31. The method of claim 29, wherein the period of time between compositions of the series is selected from the group consisting of from 1 hour, 5 hours, 10 hours, 12, hours, 24 hours, 1 day 2, days . 3, days 4, days, 5 days, 6, days, 7, days, 8 days, 9 days, 10 days, 11, days, 11 days, 12, days, 13, days, 14 days, and 15 days.

32. The method of claim 21, wherein the composition further comprises pure FSH.

33. The method of claim 21, wherein the composition further comprises pure hCG.

34. A product comprising a first pharmaceutical composition comprising FSH and a second pharmaceutical composition comprising hCG, wherein the first and the second pharmaceutical compositions are administered together or separately during a controlled ovulatory stimulation protocol.

35. The product of claim 34, wherein the separate administration is sequential.

36. The product of claim 34, further comprising instructions for using the first and second pharmaceutical compositions.

37. The product of claim 34, further comprising a means for administering the first and second pharmaceutical compositions.

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38. A use of a hCG to prepare a pharmaceutical composition for use with a pharmaceutical composition comprising FSH for infertility treatment.

39. A use of a FSH to prepare a pharmaceutical composition for use with a pharmaceutical composition comprising hCG for infertility treatment.

40. The use according to claim 38 or 39 for stimulating folliculogenesis or ovulation.

41. The use according to claim 40, wherein the ratio of FSH to hCG is conducive to folliculogenesis and follicular maturation without ovarian hyperstimulation.